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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,098	08/26/2003	Christian Lutz	DT-6571	3153

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EXAMINER

ROSENBERG, LAURA B

ART UNIT	PAPER NUMBER
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3616

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/648,098	Applicant(s) LUTZ, CHRISTIAN	
	Examiner Laura B. Rosenberg	Art Unit 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/26/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. Some examples and suggestions for amending are as follows, though all of the claims should be amended to clearly set forth the claimed subject matter in grammatically correct English:

“A locking device for two displaceable relative to each other, components having arranged opposite each other” could be changed to --A locking device for two components displaceable relative to each other, the components being arranged opposite each other-- (claim 1, lines 1-2)

“at least one displaceable against a spring biasing force, operating element provided on at least one of the opposite toothed racks” could be changed to --at least one operating element displaceable against a spring biasing force, the operating element provided on at least one of the opposite toothed racks-- (claim 1, lines 10-12)

Further, terms such as “substantially” and “and/or” should be avoided, as they render the claims indefinite. In addition, it is unclear what the tips of the teeth are being prevented from doing in lines 12-14 of claim 1. Also, it is unclear what the offset is being measured between in claim 6.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-7, 15, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto et al. (5,893,676). Yamamoto et al. disclose a locking device (including #240) able to be used with two components (including #202, 230) displaceable relative to each other, the components being opposite each other (best seen in figure 6), toothed racks (including #242, 244) having each tooth (including #246, 254) located alongside each other, the locking device comprising:

- Clamping device (best seen in figure 5) providing for movement of the two components toward each other, whereby teeth of the opposite toothed racks are brought into engagement with each other (best seen in figures 3D, 6), and in an open position the opposite toothed racks are spaced from each other and the two components can be displaced relative to each other (best seen in figures 1-3)
- Operating element (including #260) displaceable against a spring biasing force (via #262) and provided on a toothed rack (for example, #244) and able to prevent tips of teeth of opposite toothed racks from contacting each other during closing of the clamping device (best seen in figures 1-3; column 6-9)
- Operating element having a "tooth" (including ends of #260 that engage with surface #258), a tip of which (for example, bottom surface at each end of #260) projects

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beyond a plane of tips of the teeth of the toothed rack (#244) in an outwardly preloaded position of the operating element (best seen in figures 1, 2, 3A), and is located opposite a side flank (including #32, 34) of a tooth of the other toothed rack (#242) when the tips of the teeth are located directly opposite each other (best seen in figures 2, 3B)

- The components form parts of a tilting-type steering column (best seen in figure 5)
- Operating element is formed as a "stem" (for example, central portion of #260, as seen in figure 7) extending in a recess (including #258) in the toothed rack (#244), wherein the "tooth" (including #260) is provided at a free end (for example, left and right ends as seen in figure 7) of the stem (best seen in figures 7, 10)
- Compression spring (including #262) able to bias the stem, in the open position of the clamping device, to the outwardly preloaded position thereof limited by a stop (including #252)
- In a position of the toothed racks in which the tips of the teeth are located directly opposite each other (for example, figure 3B), the tip of the "tooth" of the operating element (including #260) is offset, in a direction parallel to the plane of tips of teeth, from a tip of the tooth of the toothed rack (#242) opposite the side flank of which it is located, by less than a half, specifically one fourth, of a distance between a tip of a tooth of the toothed rack (#242) and a valley between two teeth of the toothed rack (#242) measured in a direction parallel to the plane of the tips of teeth (best seen in figure 3B)

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- Compression spring (including #262) has a biasing force strong enough that, upon the tip of the operating element "tooth" engaging the side flank (including #32, 34) of the tooth of the toothed rack (#242) during closing of the clamping device, with the tips of the teeth of the toothed racks lying directly opposite each other, the two components (including #202, 230) are displaced relative to each other in a direction parallel to the plane of the tips of the teeth without the "tooth" being displaced inwardly until the tip of the "tooth" reaches a bottom of a valley (including #30) between respective teeth of the toothed rack (#242; best seen in figures 3C, 3D)
- Bolt (including #218) has an axis (for example, left and right in figure 6) extending parallel to a direction of displacement of the two components toward and away from each other
- Operating element (including #260) is supported in a component (including #230), which is associated with one of the opposite toothed racks (including #244), and able to be displaced in a direction parallel to a direction of displacement of the two components toward and away from each other (best seen in figures 3A-3D)

The examiner notes that she has referred to the first embodiment (figures 1-4) when pointing out some of the features of the second embodiment (figures 5-11) because several of the features are the same between the two embodiments and figures 1-4 provide more detailed drawings.

Allowable Subject Matter

4. Claims 8-14, 16-18, and 20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Barnes discloses an axial locking device with engaging teeth.

Fouquet et al. disclose an axial locking device including various modifications of the interlocking teeth.


Bär discloses an axial locking device in which magnets are used for proper alignment of the teeth.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura B. Rosenberg whose telephone number is (571) 272-6674. The examiner can normally be reached on Monday-Friday 7:00am-3:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Laura B Rosenberg
Patent Examiner
Art Unit 3616

LBR


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